

EVALUATION Com.

27 Feb

5

9. Co-Channel Interference (pp 12,32)

The level of interference at the threshold of visibility (TOV) was determine for the NTSC+ and for the conventional NTSC to determine if there were different.

The results showed that the Co-channel interference to the video created by both systems is the same as the one created by conventional NTSC.

Tests were also done for the audio and as expected the sound is more robust than the video.

10. Adjacent Channel Interference (pp. 12,32)

The level of interference at the threshold of visibility (TOV) was determine for the NTSC+ and for the conventional NTSC to determine if there were different.

The results showed that Upper adjacent channel interference created by both systems is the same as the one created by conventional NTSC.

Lower adjacent channel interference is lower than the one created by conventional NTSC by 2.28 dB for Digideck and by 0.95 dB by WavePhore. These differences are not significant considering the subjective nature of the test.

Tests were also done for the audio an as expected the sound is more robust than the video.

11. Bit Error Rate Performance

The bit error rate performance of both systems was measured against random noise (See first part of section 12), impulsive noise (see second part of section 12) and multipath (see section 15-16).

12. Immunity to Noise**Random Noise (pp. 13, 33)**

The level of noise for a BER of 10^{-5} was measured as well as the BER for +2, +1, -1 and -2 dB around the level of noise for this threshold of 10^{-5}

Both systems behave as expected around threshold. The carrier to noise ratio for a BER= 10^{-5} was 28 dB for Digideck and 44 dB for WavePhore. The difference of 16 dB in favor of Digideck is significant.

EXHIBIT D

31(0006) A

	Audio	Name	Condition	Test	IN	OUT	IN	OUT	IN	OUT	IN	OUT
					(hh:mm:ss)							
	D1		R-T									
	D2		T-R									
	D3		R-T									
	D4		T-R									
		50% Grey										
	T1	Flower Garden	T-R	Data On	00:01:00	00:01:10	00:01:13	00:01:23	00:01:26	00:01:36	00:01:39	00:01:49
	T2	TSN Baseball	R-T	Data On	00:01:52	00:02:02	00:02:05	00:02:15	00:02:18	00:02:28	00:02:31	00:02:41
	T3	Bus/Truck	T-R	Data Off	00:02:44	00:02:54	00:02:57	00:03:07	00:03:10	00:03:20	00:03:23	00:03:33
	T4	Red Rock	R-T	Data Off	00:03:36	00:03:46	00:03:49	00:03:59	00:04:02	00:04:12	00:04:15	00:04:25
	T5	Mobile & Calendar	T-R	Data On	00:04:28	00:04:38	00:04:41	00:04:51	00:04:54	00:05:04	00:05:07	00:05:17
Trial	1 T6	Bus/Truck	T-R	Data Off	00:05:20	00:05:30	00:05:33	00:05:43	00:05:46	00:05:56	00:05:59	00:06:09
Trial	2 T7	TSN Baseball	T-R	Data Off	00:06:12	00:06:22	00:06:25	00:06:35	00:06:38	00:06:48	00:06:51	00:07:01
Trial	3 T8	Dances with Wolves	T-R	Data On	00:07:04	00:07:14	00:07:17	00:07:27	00:07:30	00:07:40	00:07:43	00:07:53
Trial	4 T9	Mobile & Calendar	R-T	Data Off	00:07:56	00:08:06	00:08:09	00:08:19	00:08:22	00:08:32	00:08:35	00:08:45
Trial	5 T10	Flower Garden	R-T	Data On	00:08:48	00:08:58	00:09:01	00:09:11	00:09:14	00:09:24	00:09:27	00:09:37
Trial	6 T11	TSN Baseball	T-R	Data On	00:09:40	00:09:50	00:09:53	00:10:03	00:10:06	00:10:16	00:10:19	00:10:29
Trial	7 T12	Bus/Truck	R-T	Data On	00:10:32	00:10:42	00:10:45	00:10:55	00:10:58	00:11:08	00:11:11	00:11:21
Trial	8 T13	Red Rock	R-T	Data Off	00:11:24	00:11:34	00:11:37	00:11:47	00:11:50	00:12:00	00:12:03	00:12:13
Trial	9 T14	Dances with Wolves	R-T	Data Off	00:12:16	00:12:26	00:12:29	00:12:39	00:12:42	00:12:52	00:12:55	00:13:05
Trial	10 T15	Mobile & Calendar	T-R	Data Off	00:13:08	00:13:18	00:13:21	00:13:31	00:13:34	00:13:44	00:13:47	00:13:57
Trial	11 T16	Flower Garden	T-R	Data On	00:14:00	00:14:10	00:14:13	00:14:23	00:14:26	00:14:36	00:14:39	00:14:49
Trial	12 T17	Red Rock	R-T	Data On	00:14:52	00:15:02	00:15:05	00:15:15	00:15:18	00:15:28	00:15:31	00:15:41
Trial	13 T18	Bus/Truck	T-R	Data On	00:15:44	00:15:54	00:15:57	00:16:07	00:16:10	00:16:20	00:16:23	00:16:33
Trial	14 T19	Dances with Wolves	T-R	Data Off	00:16:36	00:16:46	00:16:49	00:16:59	00:17:02	00:17:12	00:17:15	00:17:25
Trial	15 T20	Flower Garden	T-R	Data Off	00:17:28	00:17:38	00:17:41	00:17:51	00:17:54	00:18:04	00:18:07	00:18:17
Trial	16 T21	TSN Baseball	R-T	Data Off	00:18:20	00:18:30	00:18:33	00:18:43	00:18:46	00:18:56	00:18:59	00:19:09
Trial	17 T22	Bus/Truck	R-T	Data Off	00:19:12	00:19:22	00:19:25	00:19:35	00:19:38	00:19:48	00:19:51	00:20:01
Trial	18 T23	Mobile & Calendar	T-R	Data On	00:20:04	00:20:14	00:20:17	00:20:27	00:20:30	00:20:40	00:20:43	00:20:53
Trial	19 T24	Dances with Wolves	R-T	Data On	00:20:56	00:21:06	00:21:09	00:21:19	00:21:22	00:21:32	00:21:35	00:21:45
Trial	20 T25	Red Rock	T-R	Data On	00:21:48	00:21:58	00:22:01	00:22:11	00:22:14	00:22:24	00:22:27	00:22:37
Trial	21 T26	Flower Garden	R-T	Data Off	00:22:40	00:22:50	00:22:53	00:23:03	00:23:06	00:23:16	00:23:19	00:23:29
Trial	22 T27	Mobile & Calendar	R-T	Data On	00:23:32	00:23:42	00:23:45	00:23:55	00:23:58	00:24:08	00:24:11	00:24:21
Trial	23 T28	TSN Baseball	R-T	Data On	00:24:24	00:24:34	00:24:37	00:24:47	00:24:50	00:25:00	00:25:03	00:25:13
Trial	24 T29	Red Rock	T-R	Data Off	00:25:16	00:25:26	00:25:29	00:25:39	00:25:42	00:25:52	00:25:55	00:26:05

BFO Order 2A

	Audio	Name	Condition	Test	IN (hh:mm:ss)	OUT	IN	OUT	IN	OUT	IN	OUT
Demo 1	D01											
Demo 2	D02											
Demo 3	D03											
Demo 4	D04											
CTC 1		50% Grey										
Warm Up 1	T1	Flower Garden	T-R	Data On	00:30:00	00:30:10	00:30:13	00:30:23	00:30:26	00:30:36	00:30:39	00:30:49
Warm Up 2	T2	TSN Baseball	R-T	Data On	00:30:52	00:31:02	00:31:05	00:31:15	00:31:18	00:31:28	00:31:31	00:31:41
Warm Up 3	T3	Bus/Truck	T-R	Data Off	00:31:44	00:31:54	00:31:57	00:32:07	00:32:10	00:32:20	00:32:23	00:32:33
Warm Up 4	T4	Red Rock	R-T	Data Off	00:32:36	00:32:46	00:32:49	00:32:59	00:33:02	00:33:12	00:33:15	00:33:25
Warm Up 5	T5	Mobile & Calendar	T-R	Data On	00:33:28	00:33:38	00:33:41	00:33:51	00:33:54	00:34:04	00:34:07	00:34:17
Trial 1	T6	TSN Baseball	R-T	Data On	00:34:20	00:34:30	00:34:33	00:34:43	00:34:46	00:34:56	00:34:59	00:35:09
Trial 2	T7	Flower Garden	R-T	Data Off	00:35:12	00:35:22	00:35:25	00:35:35	00:35:38	00:35:48	00:35:51	00:36:01
Trial 3	T8	Red Rock	R-T	Data On	00:36:04	00:36:14	00:36:17	00:36:27	00:36:30	00:36:40	00:36:43	00:36:53
Trial 4	T9	Dances with Wolves	T-R	Data On	00:36:56	00:37:06	00:37:09	00:37:19	00:37:22	00:37:32	00:37:35	00:37:45
Trial 5	T10	Bus/Truck	T-R	Data On	00:37:48	00:37:58	00:38:01	00:38:11	00:38:14	00:38:24	00:38:27	00:38:37
Trial 6	T11	Mobile & Calendar	T-R	Data Off	00:38:40	00:38:50	00:38:53	00:39:03	00:39:06	00:39:16	00:39:19	00:39:29
Trial 7	T12	Red Rock	R-T	Data Off	00:39:32	00:39:42	00:39:45	00:39:55	00:39:58	00:40:08	00:40:11	00:40:21
Trial 8	T13	Dances with Wolves	R-T	Data On	00:40:24	00:40:34	00:40:37	00:40:47	00:40:50	00:41:00	00:41:03	00:41:13
Trial 9	T14	Flower Garden	R-T	Data On	00:41:16	00:41:26	00:41:29	00:41:39	00:41:42	00:41:52	00:41:55	00:42:05
Trial 10	T15	TSN Baseball	T-R	Data On	00:42:08	00:42:18	00:42:21	00:42:31	00:42:34	00:42:44	00:42:47	00:42:57
Trial 11	T16	Bus/Truck	T-R	Data Off	00:43:00	00:43:10	00:43:13	00:43:23	00:43:26	00:43:36	00:43:39	00:43:49
Trial 12	T17	Mobile & Calendar	T-R	Data On	00:43:52	00:44:02	00:44:05	00:44:15	00:44:18	00:44:28	00:44:31	00:44:41
Trial 13	T18	Flower Garden	T-R	Data Off	00:44:44	00:44:54	00:44:57	00:45:07	00:45:10	00:45:20	00:45:23	00:45:33
Trial 14	T19	Dances with Wolves	R-T	Data Off	00:45:36	00:45:46	00:45:49	00:45:59	00:46:02	00:46:12	00:46:15	00:46:25
Trial 15	T20	TSN Baseball	R-T	Data Off	00:46:28	00:46:38	00:46:41	00:46:51	00:46:54	00:47:04	00:47:07	00:47:17
Trial 16	T21	Bus/Truck	R-T	Data Off	00:47:20	00:47:30	00:47:33	00:47:43	00:47:46	00:47:56	00:47:59	00:48:09
Trial 17	T22	Red Rock	T-R	Data On	00:48:12	00:48:22	00:48:25	00:48:35	00:48:38	00:48:48	00:48:51	00:49:01
Trial 18	T23	Mobile & Calendar	R-T	Data On	00:49:04	00:49:14	00:49:17	00:49:27	00:49:30	00:49:40	00:49:43	00:49:53
Trial 19	T24	TSN Baseball	T-R	Data Off	00:49:56	00:50:06	00:50:09	00:50:19	00:50:22	00:50:32	00:50:35	00:50:45
Trial 20	T25	Flower Garden	T-R	Data On	00:50:48	00:50:58	00:51:01	00:51:11	00:51:14	00:51:24	00:51:27	00:51:37
Trial 21	T26	Bus/Truck	R-T	Data On	00:51:40	00:51:50	00:51:53	00:52:03	00:52:06	00:52:16	00:52:19	00:52:29
Trial 22	T27	Dances with Wolves	T-R	Data Off	00:52:32	00:52:42	00:52:45	00:52:55	00:52:58	00:53:08	00:53:11	00:53:21
Trial 23	T28	Red Rock	T-R	Data Off	00:53:24	00:53:34	00:53:37	00:53:47	00:53:50	00:54:00	00:54:03	00:54:13
Trial 24	T29	Mobile & Calendar	R-T	Data Off	00:54:16	00:54:26	00:54:29	00:54:39	00:54:42	00:54:52	00:54:55	00:55:05

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